Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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| In the Matter of | ) | |
| | ) | |
| Local Exchange Carriers' Rates, Terms, and Conditions for Expanded Interconnection for Special Access | ) | CC Docket No. 93-162 |
| | ) | |
| | ) | |



# DIRECT CASE OF AMERITECH

Ameritech[1] submits this direct case in response to the Commission's order in this docket.[2] On August 13, 1993, Ameritech filed Transmittal 730. This transmittal proposes to modify the Ameritech Central Office Interconnection offering. Direct case responses that are affected by this transmittal have been modified and are included in Appendix A.

## I. RATE LEVELS.

¶ 14. Tariff review plan.

Ameritech submits as Appendix B its tariff review plan ("TRP") as required by the Designation Order. Also included are summaries of the rate and cost information.

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[1] The terms "Ameritech" and "Ameritech Operating Companies" means: Illinois Bell Telephone Company, Indiana Bell Telephone, Incorporated, Michigan Bell Telephone Company, The Ohio Bell Telephone Company, and Wisconsin Bell, Inc.

[2] In the Matter of Local Exchange Carriers' Rates, Terms, and Conditions for Expanded Interconnection for Special Access, CC Docket No. 93-162, Order Designating Issues for Investigation, DA 93-951 (released July 23, 1993) ("Designation Order").

¶ 22 (b). Itemized cost information.

Ameritech has disaggregated its costs to align with the Commission's functional categories. The following describes the costs associated with each item. In general, the investments were disaggregated from the elements filed by Ameritech in its February 16, 1993, Transmittal 697 ("Trans. 697") and updated in its April 5, 1993, Reply to Petitions To Reject or To Suspend and Investigate ("Reply Comments"). All investments were calculated on a prospective basis. Annual charge factors were applied to each investment to develop the cost of money, income tax,[3] depreciation expense, maintenance expense, ad valorem tax, and gross receipts tax. The description of this process can be found in Appendix C.

The cost of money factor used in all cases was based on a weighted average cost of capital of 10.9%. As shown in Appendix C, this factor was then used to develop the cost of money annual charge factor. It should be noted that the cost of money annual charge factor used by Ameritech to develop its costs was not that displayed on the TRP forms. The figure shown on the TRP forms was developed in accordance with the formula provided in the Designation Order, and is not computed on the same basis as described in Appendix C.

In certain instances, the nonrecurring costs and rates reflect the net present value ("NPV") of the annual costs. The basis for developing these NPVs is shown in Appendix C.

The rates on the TRP forms reflect all changes ordered by the Commission in its June 9, 1993, order[4] in this proceeding.

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[3] Ameritech uses a composite income tax rate for development of capital costs, thus there is no differentiation between Federal and State Income Taxes.

[4] In the Matter of Ameritech Operating Companies Revisions to Tariff FCC No. 2, etc., Order, DA 93-657 (released June 9, 1993) ("Tariff Order").

Following is an explanation of the costs included in the TRP items.

Ameritech Central Office Interconnection (Physical).

Entrance Facility Installation Function - Nonrecurring.

This item consists of expenses Ameritech included in the following rate elements: Vault Splicing of the Initial Fiber, Vault Splicing of Subsequent Fibers, Splice Testing of the Initial Fiber, Splice Testing of Subsequent Fibers, Cable Pulling from the Manhole to the Vault for the first foot, and Cable Pulling from the Manhole to the Vault for each additional foot. The expenses are for the material of the splice tray and splice case, and for the labor to do the splicing, the splice testing, and the pulling. Appendix 2, Pages 8 through 10 from Trans. 697, shows the applicable hours and labor rates for these activities. The labor rates used were wages plus benefits plus loadings. The loadings include motor vehicles, other tools, and miscellaneous. The loading factor for the labor rates was 17.16%.

Entrance Facility Space Function - Recurring.

This item consists of costs Ameritech included in its Conduit and Riser Space elements. The investments include the conduit from the Conduit element, and the riser space from the Riser Space element.

Entrance Facility Space Function - Nonrecurring.

This item consists of the labor expenses incurred for pulling the cable from the vault to the customer's transmission node. The labor hours and labor rate for this activity were displayed on Appendix 2, page 11 of Trans. 697. The labor rates used were wages plus benefits plus loadings. The loadings include motor vehicles, other tools, and miscellaneous. The loading factor for the labor rates was 17.16%.

Common Construction Function - Nonrecurring.

This item is made up of a portion of Ameritech's costs included in its Central Office Build Out ("COBO") element. The applicable investments are for modifications to heating, ventilation, and air conditioning systems, overhead lighting, and other miscellaneous requirements necessary to make the customer's transmission node environmentally usable.

It should be noted that Line 52 of this TRP page reflects the NPV of the annual COBO costs over 7 years using a 10.9% discount rate. The resulting nonrecurring rate is also based on that NPV.

Construction Provisioning Function - Nonrecurring.

This item reflects the costs of identifying where walls, doors, locks and keys are required. As explained on Page 5 in the Trans. 697 D&J, this time was included in Ameritech's Order charge which reflected 8 hours at a labor rate of $36.88 per hour. In addition, costs for the Service Order process were assigned to this item. The individual time required, and associated labor rates were presented in Exhibit 2, Pages 4 thru 6 in Trans. 697. These labor rates represent wages plus benefits, with no loadings.

Interconnector-Specific Construction Function - Nonrecurring.

This item includes the investment in an AC outlet included by Ameritech in its COBO element, and the cost of building a Transmission Node Enclosure, when requested by a customer.

It should be noted that Line 52 of this TRP page, for the COBO column, reflects the NPV of the annual COBO costs over 7 years using a 10.9% discount rate. The resulting nonrecurring rate is also based on that NPV.

Floor Space Function - Recurring.

This item is made up of the basic floor space costs that were built into Ameritech's floor space element. The investment is for the 100 square feet of raw

floor space, and was developed as explained on Page 6 of Ameritech's D&J filed in Trans. 697, and on pages 12 and 13 of Ameritech's Reply Comments. In addition to the expenses developed using annual charge factors, this element also includes additional expenses for administration, house services, and incremental real estate taxes. These additional expenses were described on pages 13 and 14 of Ameritech's Reply Comments.

Termination Equipment Function - Recurring.[5]

This item consists of costs that were included in Ameritech's Floor Space element, as well as costs included in the DS1 and DS3 Termination Panel elements, which are only required if a customer has exhausted the panel which was included in their Floor Space element.

The investments are for the Passive Bay included in Ameritech's Floor Space element, and for the DS1 and DS3 Termination Panel.

DC Power Installation Function - Nonrecurring.

This item includes the costs associated with the Battery Distribution Fuse Bay ("BDFB") investment included in Ameritech's COBO element, and the BDFB costs associated with Ameritech's charge for connecting a customer's equipment bay to central office DC power. This second element only applies if a customer has more than two equipment bays in their space. The first two bays are included in the COBO charge.

It should be noted that Line 52 of this TRP page reflects the NPV of the annual COBO costs over 7 years using a 10.9% discount rate. The resulting nonrecurring rate is also based on that NPV.

[5]See Appendix A for revisions based on Transmittal 730.

DC Power Generation Function - Recurring.

This item reflects the expense of providing 48 volt DC power to the customer, and was the basis for Ameritech's 48 Volt DC Power element. Also included in this expense, is the cost of powering the additional air conditioning required due to the customers taking space in Ameritech's central office.

Cross Connection Provisioning Function - Nonrecurring.

Ameritech does not have any costs associated with this item. The cross connect is ordered from the Special Access tariff, and the nonrecurring charges are assessed from that tariff.

DS1 Cross Connection Cable and Cable Support Function - Recurring.

This item consists of costs Ameritech had included in three required rate elements (Floor Space, Riser Space, and DS1 Electrical Cross Connect), as well as costs associated with the DS1 Termination Panel, which is only required if a customer has exhausted the panel included as part of the Floor Space element.

The investments included Cabling, which was included in Ameritech's Floor Space and Termination Panel elements; Racking, which was included as part of Ameritech's Riser Space element; and ABAM Jumper Cabling, which was included as part of Ameritech's DS1 Electrical Cross Connect element.

DS3 Cross Connection Cable and Cable Support Function - Recurring.

This item consists of costs Ameritech had included in three required rate elements (Floor Space, Riser Space, and DS3 Electrical Cross Connect), as well as costs associated with the DS3 Termination Panel, which is only required if a customer has exhausted the Panel included as part of the Floor Space element.

The investments included Cabling, which was included in Ameritech's Floor Space and Termination Panel elements; Racking, which was included as

part of Ameritech's Riser Space element; and Coax Jumper Cabling, which was included as part of Ameritech's DS3 Electrical Cross Connect element.

DS1 Cross Connection Equipment Function - Recurring.[6]

This item consists of costs Ameritech had included in two required rate elements (Floor Space and DS1 Electrical Cross Connect), as well as costs associated with the DS1 Termination Panel, which is only required if a customer has exhausted the Panel included as part of the Floor Space element.

The investments included a Repeater Bay and Repeater Panel, which were included in Ameritech's Floor Space and Termination Panel elements; and a Repeater, which was included as part of Ameritech's DS1 Electrical Cross Connect element.

DS3 Cross Connection Equipment Function - Recurring.[7]

This item consists of costs Ameritech had included in two required rate elements (Floor Space and DS3 Electrical Cross Connect), as well as costs associated with the DS3 Termination Panel, which is only required if a customer has exhausted the Panel included as part of the Floor Space element.

The investments included a Repeater Bay and Repeater Panel, which were included in Ameritech's Floor Space and Termination Panel elements; and a Repeater, which was included as part of Ameritech's DS3 Electrical Cross Connect element.

Security Installation Function - Nonrecurring.

This item consists of costs Ameritech included in its COBO Charge. The applicable investments were for walls, doors, locks, keys that are required to make the customer's space secure.

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[6]See Appendix A for revisions based on Transmittal 730.

[7]See Appendix A for revisions based on Transmittal 730.

It should be noted that Line 52 of this TRP page reflects the NPV of the annual COBO costs over 7 years using a 10.9% discount rate. The resulting nonrecurring rate is also based on that NPV.

Active Security Function - Nonrecurring.

This item consists of costs Ameritech included in its COBO Charge. The applicable cost is the expense of doing security checks and providing identification cards to customer's personnel.

It should be noted that Line 52 of this TRP page reflects the NPV of the annual COBO costs over 7 years using a 10.9% discount rate. The resulting nonrecurring rate is also based on that NPV.

Ameritech Virtual Optical Interconnection Service.

Entrance Facility Space Function - Recurring.

This item consists of costs Ameritech included in its Conduit and Riser Space elements. The investments include the conduit from the Conduit element and the riser investment per foot and the racking investment per foot from the riser space element. In addition, this item includes investments from the Riser Facility element, which consist of connectorizers, cable, floor space and a 7 foot bay.

Termination Equipment Function - Recurring.

This item consists of costs that were included in Ameritech's Equipment Bay element; the Optical Line Terminating Multiplex System elements which consist of AT&T DDM 1000 90Mbs and 180Mbs systems, Telemetry Circuit Pack, Muldem for DS3 capacity and Muldem for DS1 capacity (up to 28 DS1 capacity per muldem); the Optical Line Terminating Multiplex Channel Plug-ins element; and the Test Equipment and the Maintenance Spare Equipment elements.

The investment is for a 7 foot equipment bay with an AT&T fuse panel per bay. Direct costs include the cost of money, depreciation expense, maintenance expense, income taxes, ad valorem taxes, and gross receipts taxes associated with the investments. In addition, the expenses include the cost of leasing an alarm panel, DS3U1 and DS3U2 circuit packs, and test equipment per craft interface terminal unit, AT&T DDM1000 OLTM storage shelf and storage of AT&T DDM1000 plug-ins, power unit, and various circuit packs necessary to support the DDM1000 system.

Termination Equipment Function - Non-Recurring.

This item includes the labor costs for installing the alarm panel for the equipment bay, the Optical Line Terminating Multiplex System elements, and the Optical Line Terminating Multiplex Channel Plug-ins.

The nonrecurring charge that recovers labor costs for providing virtual collocation were derived by applying an installation factor to translate material prices into installed component unit investments. The in-plant factor includes telco engineering and installation, sales tax, supply expenses, shipping and testing.

DS3 Cross Connection Equipment Function - Recurring.

This item consist of costs included in the Digital Cross Connect element which is made up of a DSX panel and bay which provides a termination field for up to 24 DS3 channels.

¶ 22 (c). Overhead Cost Information.

¶ 22 (c) 1). Overhead loadings.

The overhead factor used to develop each rate element for expanded interconnection service was 1.58. An overhead factor of 1.58 indicates that for every dollar of direct costs, there are 58 cents of overheads or indirect costs.

Applying this factor to direct costs results in fully distributed costs. The development of Ameritech's overhead loading factor is displayed in Appendix D.

Ameritech applied overheads to each interconnection rate element in a consistent manner. The 1.58 overhead loading factor was applied to the direct cost for each element. The only variances in overhead loadings occurred as a result of the rate adjustment factors set forth in the Tariff Order.

Appendix E lists the ratios of rate to cost for each Ameritech DS1 and DS3 service. These ratios were calculated by developing a point-to-point service configuration for each volume and term discount. Each configuration consists of two Local Distribution Channels, two Channel Mileage Terminations and the number of Channel Miles associated with an average DS1 or DS3 service. These ratios do not reflect overhead loadings but reflect the difference between rates and costs established through the rules of Price Cap regulation.

Comparison of overhead loadings for Ameritech's DS1 and DS3 services with interconnection services is not appropriate. The former services have been under price cap regulation for two and one-half years.

The Commission stated that

> While price cap regulation continues to take costs into account, it is intended to allow rates to migrate away from fully distributed costs and toward a set of rates that are more economically efficient.[8]

Any differences in pricing between the special access DS1 and DS3 services and the expanded interconnection services is a direct result of differences in how these services are regulated.

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[8] In the Matter of Policy and Rules Concerning Rates for Dominant Carriers, CC Docket No. 87-313, Order on Reconsideration, released April 17, 1991 at ¶ 159.

Ameritech's Carrier Access Billing System ("CABS") costs were not properly reflected in the development of the rate adjustment factors ("RAFs") the Commission required in its June 9, 1993, Tariff Order. As shown in Appendix 2, page 7 of 12 of Trans. 697, CABS costs were added to the net present value of the other Central Office Build Out ("COBO") costs. These CABS costs did not, of course, have an NPV calculation associated with them because they will be incurred on a one-time basis.

The Commission developed the RAFs using information provided by Ameritech in a May 4, 1993, data request response. Ameritech included the CABS costs in its data request response as part of the Other Operating Expenses, thereby including CABS costs as part of Total Direct Costs. The Commission used information from the data request to calculate a ratio between the restated direct costs (i.e., direct costs less ad valorem tax, gross receipts tax, and other operating expenses) and the direct costs displayed in the data request. This ratio was then applied to the NPV displayed in the data request. Since the direct costs and NPV on which Ameritech's rates are based did not include the CABS costs, the data used by the Commission overstated the adjustment and did not allow for recovery of these costs.

Appendix F shows a restatement of COBO RAF calculation to properly reflect the inclusion of CABS costs. Ameritech proposes the rates be adjusted to correct this oversight.

¶ 22 (c) 2). Closure factors.

Ameritech believes that comparing the total revenue requirement for a category of service to that of the direct costs for a service within the category is a reasonable method for determining overhead loadings. The revenue requirement, by definition, consists of the direct and indirect costs associated

with a category of service. Dividing the revenue requirement, after appropriate exclusions (nonrecurring, special construction, ICB and interstate special access miscellaneous revenues), by the direct costs for all services within the service category, results in a factor which represents the joint and common costs or overheads for the service category.

¶ 22 (d). Sample price outs.

Sample price outs based on 100 DS1s are included as Appendix G.[9]

¶ 22 (e) et seq. Individual rate elements.

¶ 22 (e). Non-recurring charges for recurring costs.

Ameritech's calculation of the NPV of its Central Office Build Out ("COBO") and Ability to Connect One 7 foot Equipment Bay to BDFB costs include costs for income taxes, maintenance expense, ad valorem taxes, and gross receipts taxes, as well as cost of money and depreciation. In addition, the COBO element also includes costs for security checks and issuance of identification cards to employees of the interconnecting customers. As stated in Ameritech's D&J of Trans. 697, Ameritech will continue to incur these costs over the life of the service, thus their inclusion is appropriate. The discount rate used to develop this NPV was 10.9%, which is the same rate used to develop the cost of money annual charge factor. Although the depreciable life of the COBO plant is 40 years for the building modifications, and 7 years for the BDFB, the NPV was computed using 7 years. As stated on pages 10 and 11 of Ameritech's Reply Comments, 7 years was chosen based on an estimate of the average length of time an interconnector would occupy space in a central office.

[9]See Appendix A for revisions based on Transmittal 730.

In this Designation Order, on page 12, in paragraph (e)(1), the statement is made that inclusion of costs other than cost of money and depreciation will result in charges greater than the initial capital outlay. In the case of Ameritech's COBO charge, Appendix 2, Page 7 of 12 of Trans. 697 clearly shows that the NPV of $29,013.02 is less than the capital outlay of $33,604.52. while the resulting rate of $40,212.53[10] is greater than the capital outlay, the reason is the overhead loading factor, not the inclusion of costs other than depreciation and cost of money.

¶ 22 (f). Floor space charges.

¶ 22 (f) 1). Land and building costs.

The spreadsheet included as Appendix H illustrates the investment of each of the 45 locations (9 offices in each Ameritech Operating Company) used as samples to support Ameritech's cost analysis. This investment has accumulated over as many as 70 years. The investment value does not truly reflect the current value of the building. The true net book value (less depreciation) is not tracked on a building-by-building basis, only by general class of plant.

The market value for each location is not available. The best approximation of current value, short of an expensive appraisal program, involves the approximation of the costs to reconstruct the building. R. S. Means compiles that data annually and publishes it in its Construction Cost Data Book. Using this as a basis to price the space is fair. These are the costs an interconnector would face if it chose to build a central office building with the same components and systems. If it chose to lease typical commercial office space, it would have to spend additional amounts to bring the space up to central office standards.

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[10] This rate reflects the RAF ordered on June 9, 1993.

¶ 22 (f) 2). Other costs.

Ameritech used an incremental approach to determine the cost of floor space, and so did not use market value rental rates as a basis for the rates. Ameritech determined the current cost of the building using R. S. Means data. To that figure Ameritech applied annual charge factors to recover cost of money, depreciation, and taxes. To this "base rent" was added normal pass through operating expenses, i.e., maintenance, utilities, janitorial, administrative, etc. This is a typical formula followed by commercial landlords to establish normal returns.

¶ 22 (f) 3). Means data.

Included as Appendix I are pages from the 1991 R. S. Means Construction Cost Data Book, comparing the Construction costs for telephone exchanges to office buildings. As demonstrated on Appendix J, these construction costs were then adjusted by the means city index factors. These costs were further adjusted with telephone plant index factors, as show in WP-2, p. 1 of 2, of Ameritech's Reply Comments. The rates do not include any property taxes, overhead loadings, utility costs or tenant accommodation costs.

¶ 22 (f) 4). Sampling.

The sample was chosen to reflect a cross section of large, medium and small central offices in which interconnection may be expected in each state. The sample included 9 Central Offices ("COs") from each of the Ameritech states, with 3 large, 3 medium and 3 smaller COs. The COs used in the sample are:

ILLINOIS:

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|---|---|---|
| CHCGILFR | 311 W. Washington | Chicago |
| CHCGILWB | 520 S. Federal | Chicago |
| NBRKILNB | 2029 S. Walters Ave. | Northbrook |
| EGVGILEG | 10 N. Scott | Elk Grove |
| SPFDILES | 601 S. 6th St. | Springfield |

| | | |
|---|---|---|
| CHMPILCU | 708 S. 4th St. | Champaign |
| ARLHILAH | 106 N. Eastman | Arlington Heights |
| EMHRILET | 152 S. York | Elmhurst |
| ECHGILEH | 1401 Deer Creek Rd. | East Chicago Heights |

INDIANA:

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|---|---|---|
| IPLSIN01 | 240 N. Meridian | Indianapolis |
| IPLSIN08 | 740 S. Fuller | Indianapolis |
| CRMLIN01 | 520 E. 106th St. | Carmel |
| CFVLIN01 | 308 E. Main St. | Crawfordsville |
| FSHRIN01 | 8315 Masters Rd. | Fishers |
| HMNDINHW | 422 Fayette St. | Hammond |
| GARYINGO | 725 Madison | Gary |
| NBVLIN01 | 212 S. 9th St. | Noblesville |
| SBNDIN01 | 307 S. Main St. | South Bend |

MICHIGAN:

| | | |
|---|---|---|
| DTRTMIBL | 1365 Cass Ave. | Detroit |
| GDRPMIBL | 114 N. Division | Grand Rapids |
| ANARMIMN | 324 E. Huron St. | Ann Arbor |
| PNTCMIMN | 54 N. Mill St. | Pontiac |
| DRBRMIFB | 17651 Michigan Ave. | Dearborn |
| SFLDMIMN | 25189 Lahser Rd. | Southfield |
| ABHGMIMN | 6950 Crooks Rd. | Auburn Heights |
| TROYMIMN | 1145 Rochester Rd. | Troy |
| WRRNMITL | 34480 VanDyke | Warren |

OHIO:

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|---|---|---|
| CLEVOH62 | 750 Huron Rd., S.E. | Cleveland |
| DYTNOH22 | 300 W. First St., S.W. | Dayton |
| WOTNOH88 | 6650 N. High St., SS | Worthington |
| ECLDOH73 | 25900 Lakeland Blvd. | Euclid |
| UPAROH45 | 4646 Reed Rd., SS | Upper Arlington |
| NWALOH85 | 14 W. Main St., SS | New Albany |
| CLEVOH64 | 7225 Broadway | Cleveland |
| CLEVOH25 | 13630 Lorain Ave. | Cleveland |
| CNTMOH43 | 7201 Far Halls | Centerville |

WISCONSIN:

| | | |
|---|---|---|
| MILWWI13 | 740 N. Broadway | Milwaukee |
| MDSNWI11 | 122 W. Main St. | Madison |
| APPLWI01 | 221 W. Washington | Appleton |
| MILWWI45 | 405 Fairway Dr. | Milwaukee |
| MDSNWI12 | 215 Kedzie St. | Madison |
| MILWWI42 | 3044 S. Logan Ave. | Milwaukee |
| MDSNWI15 | 1001 Spring St. | Madison |
| CDBGWI15 | W63 N548 Hanover | Cedarburg |
| MNFLWI32 | W156 N8930 Pilgrim Rd. | Menomonee Falls |

The costs of these central offices were averaged using projected demand for interconnection in each of these central offices.

¶ 22 (g). Power charges.

As provided in Trans. 697's D&J, Appendix 2, page 4 of 12, the cost of DC power per fuse amp was calculated as follows:

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|---|---|
| 1 Voltage Direct Current per Fuse Amp | 0.0521 |
| 2 Annual Kilowatt Hours (KWH) | 8,760 |
| 3 Average Cost per KWH | $0.10 |
| 4 Basic DC Power Cost (L1*L2*L3) | 45.62 |
| 5 Incremental Air Cond Power Cost | 15.06 |
| 6 Total Annual DC Power Cost per Fuse Amp (L4+L5) | 60.68 |
| 7 Total Monthly DC Power Cost per Fuse Amp (L6/12) | 5.06 |

With respect to air conditioning requirements (line 5 above), cooling loads are expected to increase as additional power is requested; that is, the amount of air conditioning and air flow required for a customer's equipment will increase proportionately with the amount of DC circuits provided. The incremental cost was calculated as follows:

| | |
|---|---|
| 1 Average Direct Current per Fuse Amp | 0.0521 |
| 2 Annual Kilowatt Hours | 8,760 |

| | |
|---|---|
| 3 Coefficient of Performance[11] | 0.33 |
| 4 Average Cost per KWH | $0.10 |
| 5 Annual Incremental Air Cond Power Cost (L1*L2*L3*L4) | $15.06 |

22 (h). Cross connection and termination equipment charges.

¶ 22 (h) 1). Repeaters.[12]

Ameritech's physical collocation design included repeaters and/or regeneration in all cases. This interconnection scenario utilizes industry requirements for maintaining an equal level signal test point at the DSX (i.e., referred to as Passive Bay). To maintain a 27 foot or 85 foot DSX cross-connection limitation for DS3 and DS1 signals respectively, regeneration is required in all cases.[13] This design meets and provides a normal DSX template for both DS1 and DS3 interfaces.

¶ 22 (h) 2). Distributed configuration.

Ameritech is not sure what the Commission means by the terms "centralized" and "distributed" in this context. However, this is how Ameritech configures its service:

Ameritech provides aggregated repeater bays to serve multiple transmission nodes within a central office. Separate repeater shelves (i.e., not necessarily equipped with plug-ins) are allocated to each interconnector to meet

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[11] The coefficient of performance refers to the amount of energy required to cool the heat given off by electric equipment. In other words, if one kilowatt of electricity is consumed by a piece of telephone equipment, an additional .33 kilowatt is necessary to cool that equipment.

[12] See Appendix A for revisions based on Transmittal 730.

[13] See Bellcore TR-NPL-000320, Issue 1, April 1988, "Fundamental Generic Requirements for Metallic Digital Signal Cross-Connect Systems DSX-1, -1C, -2, -3" and ANSI T1.102-1987, "Digital Hierarchy - Electrical Interfaces."

service requirements. One or more bays may be required; however, separate bays and powering are not provisioned on a customer-by-customer basis.

¶ 22 (h) 3). POT bay (Passive Bay).[14]

Ameritech's physical collocation arrangement utilizes a "passive" bay arrangement to establish cross-connection capabilities and maintain a physical demarcation point. The "passive" bay, containing non-powered DSX panels, was designed specifically to meet equal level signal requirements, and establish a cross-connect point.

¶ 22 (i). Security charges.

It is reasonable for Ameritech to require security escorts when an interconnector is going to and from the collocation area to work on its equipment and must pass through unsecured central office space. Central offices are highly sensitive areas that are critical to Ameritech's service to its customers and the viability of its business. As a result, these are not public buildings and admittance is strictly controlled. Access is limited only to authorized Ameritech employees and contractors directly employed by the company for a limited duration. Contractors are carefully screened and instructed as to the care that must be taken and the liability that would result if care was not exercised while working in the building. In cases in which space is leased to a third party, the space is generally secured, allowing no access to any other part of the central office.

It is Ameritech's intent to provide space to interconnectors that allows secured, unimpeded access 24 hours a day. However, in those cases in which the space is not reasonably possible to secure or the cost to secure the space places an

[14]See Appendix A for revisions based on Transmittal 730.

unreasonable burden on Ameritech and the interconnector, escorts will be required. Allowing free and unimpeded access to central office space would render it difficult for Ameritech to protect its network, to the detriment of both Ameritech and its interconnector-customers.

¶ 22 (j). Virtual collocation rates.

¶ 22 (j) 1). Lease back charges.

Ameritech chose to use the manufacturer's list price to develop the leaseback charges for interconnection equipment for a number of reasons. First, if multiple interconnectors use the same type of equipment, using the same leaseback charges results in all customers paying the same price for the same service under the tariff. Second, if Ameritech were to use the price that the interconnector actually paid for the equipment, it would release potentially proprietary information that the interconnector would not want disclosed to the world. On the other hand, the list price of the equipment is not proprietary information and could be used for any interconnector, for any type of equipment.

¶ 22 (j) 2). Full capacity.

Ameritech does not require full capacity to provide service. Rather it is imposed by vendor equipment configuration. For example, the two muldems which are associated with the 90Mbs system must be dedicated to either DS1 or DS3 service. The capacity of a muldem is either 28 DS1s or a single DS3. There are 28 DS1s in a DS3. Therefore, it is not physically possible to place a single DS1 on a muldem, and then to add a DS3.

¶ 22 (j) 3). Stockpiling parts.

As stated in sec. 16.3.6(G) of F.C.C. No. 2, "The customer must order sufficient OLTM storage shelf capacity for the quantity and type of maintenance spare plug-ins ordered." Ameritech does not require that an interconnector keep any spare parts on hand in any central office. The tariff provides for the ability for a customer to do so, if it so chooses. If the interconnector chooses to provide spare parts, they must have sufficient shelf capacity for these spares. However, if it chooses not to keep spares on hand and a spare part is required to fix a circuit, it will take additional time for the interconnector to get the replacement part to Ameritech's technicians in order to get the customer's service back up and running. This could be valuable time that the interconnector customer would be out of service. Keeping a minimum supply of spare parts on hand would significantly reduce this maintenance time and is recommended.

II. RATE STRUCTURE.

¶ 31 (a). Bundling.[15]

Ameritech's rate structure for Expanded Interconnection is highly unbundled. The rate structure for physical collocation, ACOI, contains separate rate elements for Floor Space, Central Office Build Outs, Termination Panels, Connection to the DC Power Supply, DC Power, Cable Pulling and Splicing, Riser Facilities and Entrance Facilities. Because it was determined that each customer would have at least two 7 foot equipment bays in the transmission node, it was determined that the cost of connecting those bays to the DC power supply would be included in the Central Office Build Out charge. Dissagregating the rate element would not reduce the charge to the customer.

[15]See Appendix A for revisions based on Transmittal 730.

Additionally, a passive bay ("DSX bay") and a repeater bay were included in the Floor Space rate element. Again, because these costs would always be incurred in providing a transmission node there was nothing to be gained by further disaggregating the rate element.

¶ 31 (b). Central office construction charges.

¶ 31 (b) 1). Interconnector-specific construction costs.

Ameritech developed the COBO nonrecurring costs by averaging the cost of central office modifications over the expected number of 100 square foot transmission nodes within an office anticipated to be requested over a 3-year period. This methodology assures the least amount of double recovery possible, since it does not assess the entire build out cost to any single customer. In any given office the costs of building out the office may be over- or under-recovered (the costs or the demand may vary with the office), but in total the cost to Ameritech of providing building modifications for interconnection will be neither over- nor under-recovered.

It is appropriate to recover ongoing costs on an NPV basis through the nonrecurring COBO charge. These costs will continue to be incurred by Ameritech upon completion of the modifications whether or not a customer maintains the transmission node. Although costs will be incurred over the life of the modifications, it was assumed that on average a customer would maintain the transmission node for 7 years. By recovering these costs through the nonrecurring charge, Ameritech passes some of the risks of providing interconnection to the customers ordering the service.

¶ 31 (b) 2). Common construction costs.

Ameritech has chosen to average the common construction costs over all interconnectors. This method was chosen rather than charging the first interconnector entering the CO the total cost (and then rebating as others enter) since this places less of a financial burden on the first interconnectors.

The demand estimates were developed based on discussions with potential interconnection customers. This demand was provided in Trans. 697.

¶31(e). Power increments.

Ameritech chose to charge energy usage costs for collocation customers based on the incremental fuse size (cost per fuse/amp) requested by the interconnection customer. The decision to provide incremental "per fuse/amp" costs was based on the fact that the interconnection customer's power requirements will vary based on the circuit capacity. Establishing a cost per fuse/amp provides a flexible, cost effective method for determining the energy usage costs for the interconnection customers. It also allows the interconnection customer the ability to determine the energy usage costs up front based on the fuse size required for the equipment.

The costs for providing metered service became prohibitive for both the interconnection customer and Ameritech due to the cost of procurement and installation of individual meters; secondary power distribution management; periodic meter readings; and the administration of billing services.

The objective was to provide a cost effective method of recovering the energy usage costs consumed by the collocation customer's equipment. Individual metered service was not found to be cost effective, since the costs of implementing, managing and administering a metered service would have to be passed on to the interconnection customer. Energy usage costs based on a "per

fuse/amp" basis will be cost effective for the interconnection customer and Ameritech.

¶31(g). Extraordinary costs.

In rare instances, unforeseen costs which have not been reflected in the Central Office Build Out charge will be incurred to modify a central office for collocation. In these instances, since the cost of modification is directly related to a request for collocation, Ameritech should have the ability to recover these costs. Those costs which were not included as part of the average cost for Central Office modifications will be considered to be extraordinary. These costs will include, but are not limited to major modifications to the HVAC systems, modifications to the building's power infrastructure, removal of asbestos, additional AC power circuits (other than those included in the Central Office Build Out charge) and additional lighting.

Extraordinary rates as described in F.C.C. No. 2 at Section 16.1.2 (A)(8) will be filed with the Commission and are expected to be incurred infrequently.

III. SPACE AND LOCATION PROVISIONS.

¶36(a). Minimum/maximum space requirements.

Ameritech has established the maximum amount of square footage that can be ordered at one time at 200 square feet. This is not the limit of the total amount of space available to a customer unless there is a limitation of total space available in the central office. That amount was chosen based on input from potential interconnectors. In addition, if there is not 100 square feet available in a central office (and something less than 100 square feet is available) and a customer is interested in interconnection, Ameritech will offer that available

Offering customers any size space would result in a very inefficient use of the available space. For example, it would become impossible to fit the puzzle pieces together to make good use of the space if one customer ordered 50 square feet, another 75, another 100, etc. To give each customer access to its space could result in a maze with much more hallway needed than would be by using standard increments.

¶36(c). Additional space.

Ameritech has averaged central office build out costs over the total forecasted demand on a 100 square foot basis. Therefore, a request for an additional 100 square foot increment is treated as another order involving the same cost as the first 100 square foot order. When a customer orders an additional 100 square feet of space, whether it is treated as an addendum to the original order or as a new order does not change the total amount of cost incurred in order to make the space available to the customer.

In order to offer the option of an addendum at a lower price, the demand forecast would have to be redone. The result would be a higher charge for the first 100 square feet ordered and a lower charge for additional space requested. This would require every customer ordering interconnection to pay more than the rate currently in the tariff for the first 100 square feet, and only those customers ordering more than 100 square feet would be able to take advantage of the lower price.

¶36 (d). Contiguous space.

The Ameritech policy is described in section 16.1.2 (A)(6)(a) of its tariff. Ameritech will provide contiguous space to the interconnector if it is available. However, as the tariff goes on to state, "the availability of such contiguous space

cannot be guaranteed." If contiguous space is not available, Ameritech will provide space as close as possible to the interconnector's existing space. Direct cabling between a customer's non-contiguous space will be provided on a time and materials basis.

IV. CHANNEL ASSIGNMENT.

¶41 (a) and (b). Control of channel assignment.[16]

Ameritech's interconnection arrangement permits interconnectors to control their own channel assignments. Appendix K provides a schematic diagram of Ameritech's intra-office equipment and wiring configuration from Ameritech's DSX, which provides the cross connect point to other access services, to the passive bay located outside of the interconnector's space. The schematic is the same for DS1 and DS3 facilities. In the case where the repeater is not required, the cabling will be placed directly between the passive bay and the DSX. Ameritech will terminate each cable pair on a one-for-one basis in consecutive order so that slot 1 at the DSX will appear at slot 1 in the passive bay. The repeater equipment does not require a slot-to-slot alignment but will be wired in consecutive order as needed.

At the passive bay, the interconnector terminates a cross connect from the Ameritech assigned position on the passive bay to the interconnector's assigned equipment and its own configuration. This provides the interconnector with total channel assignment control from its equipment to the passive bay. Ameritech will control the intra-office slot/channel assignment from the DSX to the passive bay.

When a service request is received, Ameritech will provide the interconnector with the passive bay appearance and at that point the interconnector may assign its own termination at its equipment. This

[16]See Appendix A for revisions based on Transmittal 730.